SITE: Barite Hill
BREAK: 2.8
OTHER:

U.S. Environmental Protection Agency
Region IV ERRS

2 8 0001

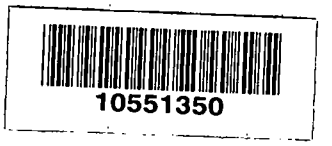
CONTRACTOR'S FINAL SITE REPORT

Barite Hill Nevada Goldfields Site
McCormick, South Carolina

Task Order No. 02-04-F4-0071

May 21, 2007

CMC, Inc.
1151 Jessamine Station Road
Nicholasville, Kentucky 40356
(859) 885-4955



1.0 INTRODUCTION

This document contains the Contractor's Final Site Report for the Barite Hill Nevada Goldfields Site in McCormick, South Carolina. This report is submitted in accordance with Contract No. 68-S4-0204, Attachment F-1, Reports of Work, Section A-3, Contractor's Final Site Report.

On March 28, 2007, CMC was issued Task Order No. 02-04-F4-0071 to assist in the emergency response to mitigate threats from leaking drums and public access at this gold mining site in McCormick, South Carolina. The task order period of performance was from March 27, 2007, through April 30, 2007. The ceiling was $50,000. Copies of the task order and the Statement of Work are attached as Figures 1.1 and 1.2, respectively. The assigned EPA On-Scene Coordinator (OSC) for the site was Leo Francendese, and the CMC Project Manager was Neville Kingham. No modifications were issued on this task order.

Table 1-1
Task Order 02-04-F4-0071 and Modifications

Number	Effective Date	Completion Date	Modification of Date	Ceiling	Description of Modification
0204-F4-0071	3/27/07	4/30/07	–	$50,000	Original task order

In accordance with Section H.31, 3(h), CMC, Inc. acknowledged receipt of the TO on April 5, 2007. In accordance with Section H.2(b), certification that no organizational conflict of interest (COI) existed for this site was submitted on April 5, 2007. The Acknowledgment Letter, COI Search, and COI Certification Letter for the TO are included herein as Figures 1.3, 1.4, and 1.5, respectively.

The task order included the following:

- Mobilize to the Site by 1200 on March 28, 2007.
- Develop a Site-Specific Health and Safety Plan. (Attachment 2)
- Conduct necessary actions to mitigate the threat posed from the leaking drums as directed by the OSC on scene.
- Conduct necessary actions to mitigate public access to the Site as directed by the OSC on scene.
- Prepare a draft Site report within 10 days of demobilization from the Site.
- Overtime not to exceed 20 hours per person per week.

2.0 SUMMARY OF ACTIVITIES

On March 27, 2007, CMC received notification to mobilize for an emergency response action at the Barite Hill Nevada Goldfields site. CMC mobilized equipment and personnel on March 28 and proceeded to the site with 3 truck drivers, 2 laborers, 3 equipment operators, 1 field cost accountant, and 1 foreman. The major equipment used for this response includes 2 trackhoes, shears, grappler, 4 pickup trucks, 1 two-ton flatbed, 1 offroad dump truck, 3 lowboys and road tractors, generator, and equipment trailer.

On March 28, CMC met with the OSC to go over the statement of work, site setup, development of decontamination area, and building and shoring of road to the acid pit. On March 29, the objective was to collect, stage, reposition and neutralize in the acid pit the chemicals found around the site in tanks, drums, buckets and containers. The following chemicals were discovered and disposed of:

- 900 pounds of dry caustic soda
- 40 gallons of a strong acid
- 110 gallons of acid
- 110 gallons of sodium hydroxide
- Residual caustic soda from the demolition of plastic AST

The above chemicals were reacted and neutralized in the acid pit. The acid pit road was completed on this day.

On March 30, CMC began demolition of the processing building, which was approximately 50 x 50 x 16 feet. This building was an acute and chronic problem based upon the metals dust in building and ductwork and the accessible nature of the building. During removal of the ductwork and building components, CMC personnel were in Level B and continually sprayed down the area to minimize dust. As ductwork and building components were removed, they were transported and placed in the acid pit. CMC also started preparing access areas and roads to the site for signage describing hazards of the site.

On March 31, CMC completed demolition of the building and its components and continued to spray the area down to minimize dust. All materials were transported and placed in the acid pit. CMC decontaminated the concrete pad under the building, and all wash water was pumped to one of the processing ponds. The crew also continued collection of chemicals from around the site and investigated each building for potential hazards and chemicals. The following chemicals were discovered and neutralized in the acid pit:

- Seven 5-gallon pails of a solid salt from the WWTP
- 150-gallon mixing tank half full of solid salts from the WWTP

The crew continued setting up of sign posts and signage for access points around the site, and started decontaminating equipment in anticipation of demobilizing.

Aerial photos were taken of the site (Attachment 1).

Final demobilization occurred on April 2, 2007.

3.0 TRANSPORTATION AND DISPOSAL SUMMARY

Transportation and Disposal was not required.

4.0 FINANCIAL SUMMARY

The total funding for Task Order 0204-F4-0071 was $50,000, of which $45,095.20(or 90.19%) was used. Table 4.1 provides a summary of the task order, while Table 4.2 gives a detailed breakdown of expenditures. A summary of CMC invoices is provided in Table 4.3.

Cost detail is provided in the following figures, which are attached:

- Figure 4.1: IOL 1900-55 Cost Summary
- Figure 4.2: Personnel Summary Report (Categorical)
- Figure 4.3: Equipment Summary Report (Categorical)
- Figure 4.4: OFC Summary (Cost Type)

Provisional Rates were required on this task order:

- 01-002-001 All Terrain 4-Wheeler

Since all issues have been resolved on this task order and the remaining funding is more than 5% of the obligated amount, CMC requests that the balance of $4,904.80 be deobligated.

Note: Due to the CONFIDENTIAL nature of the material, pages 2 8 0004 – 2 8 0009 of this document have been withheld. Withheld material is available, for Judicial review only, in the Records Center at EPA Region IV, Atlanta, Georgia.

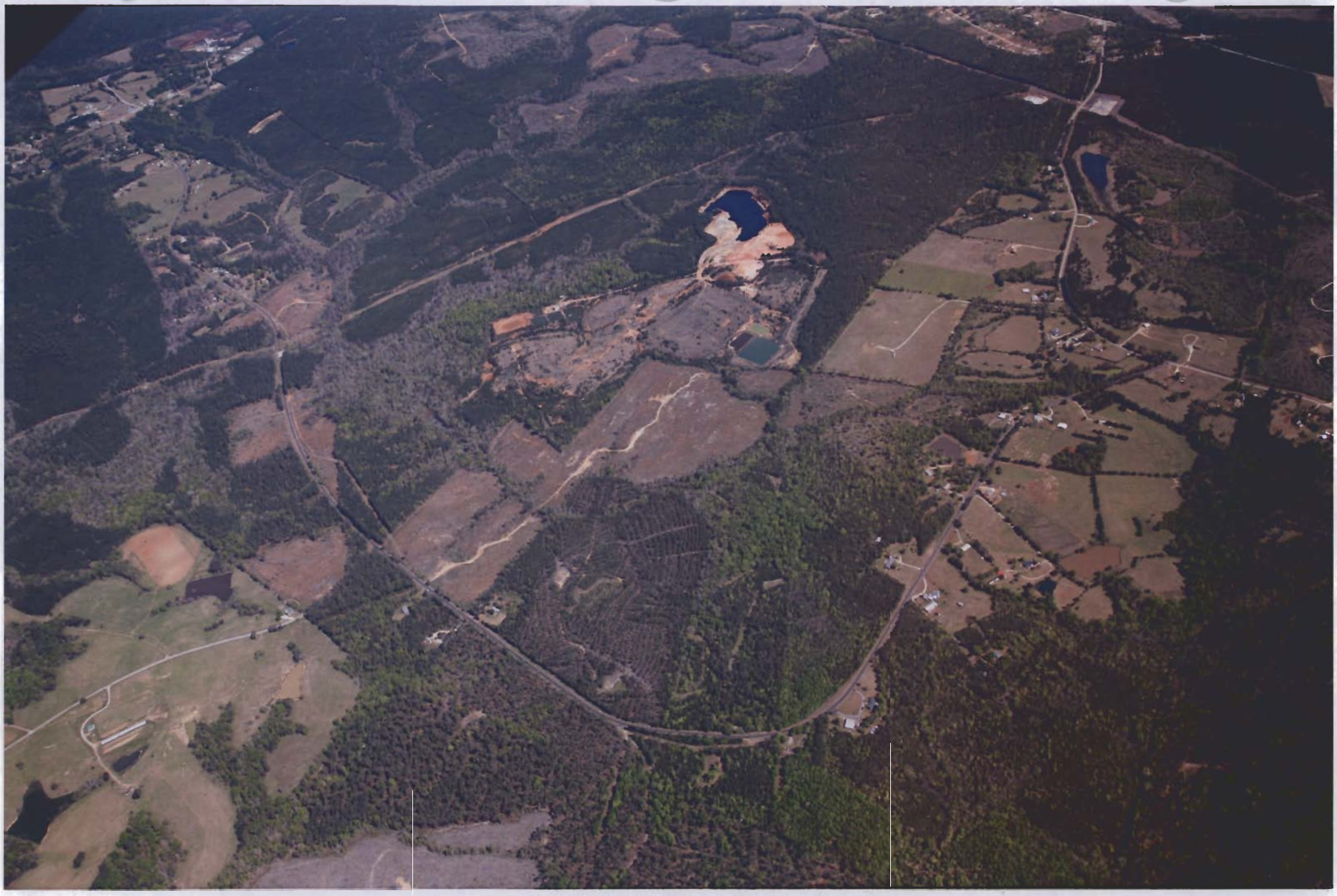
AERIAL PHOTOS

Attachment 1

2 8 0011

2 8 0012

2 8 0013



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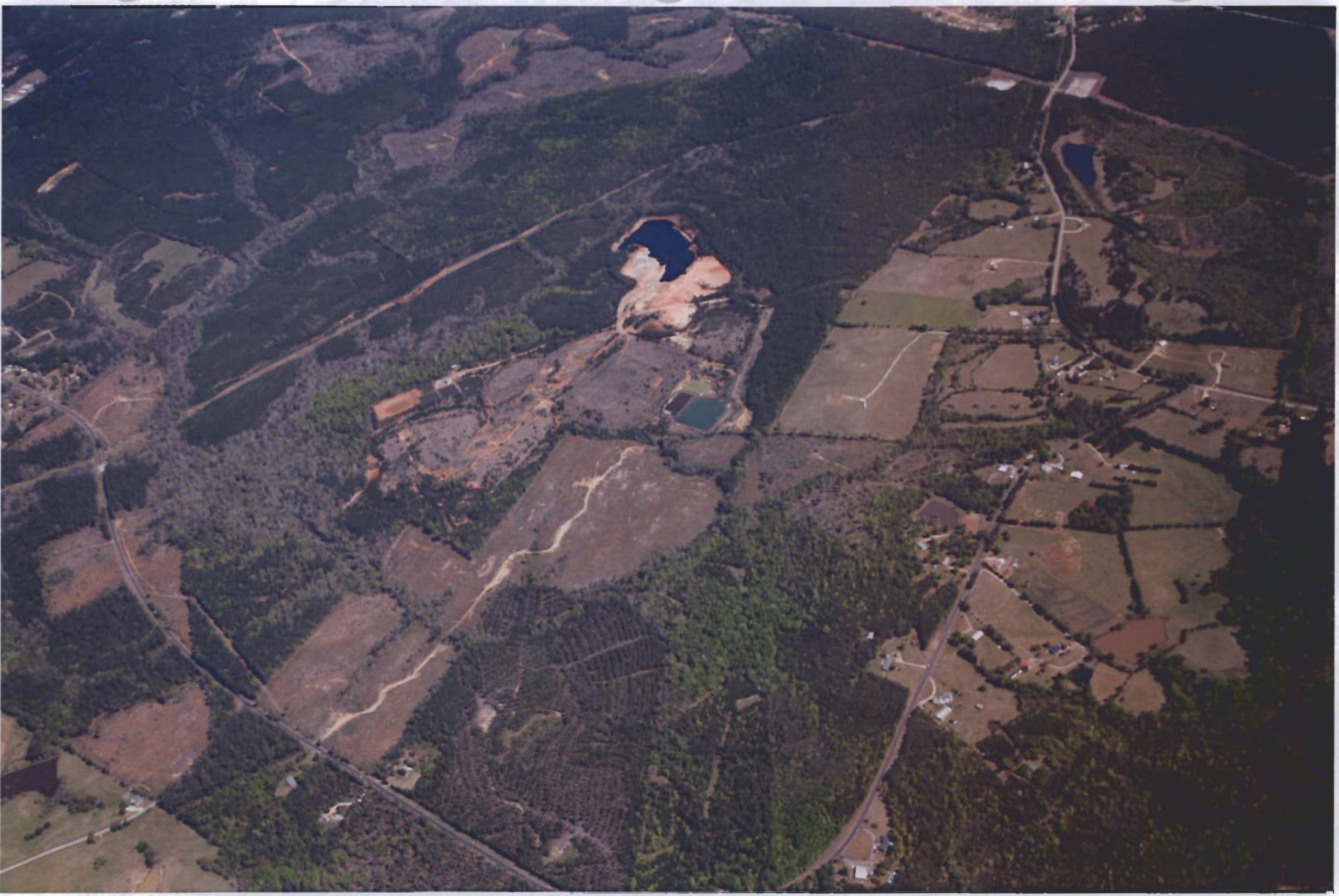

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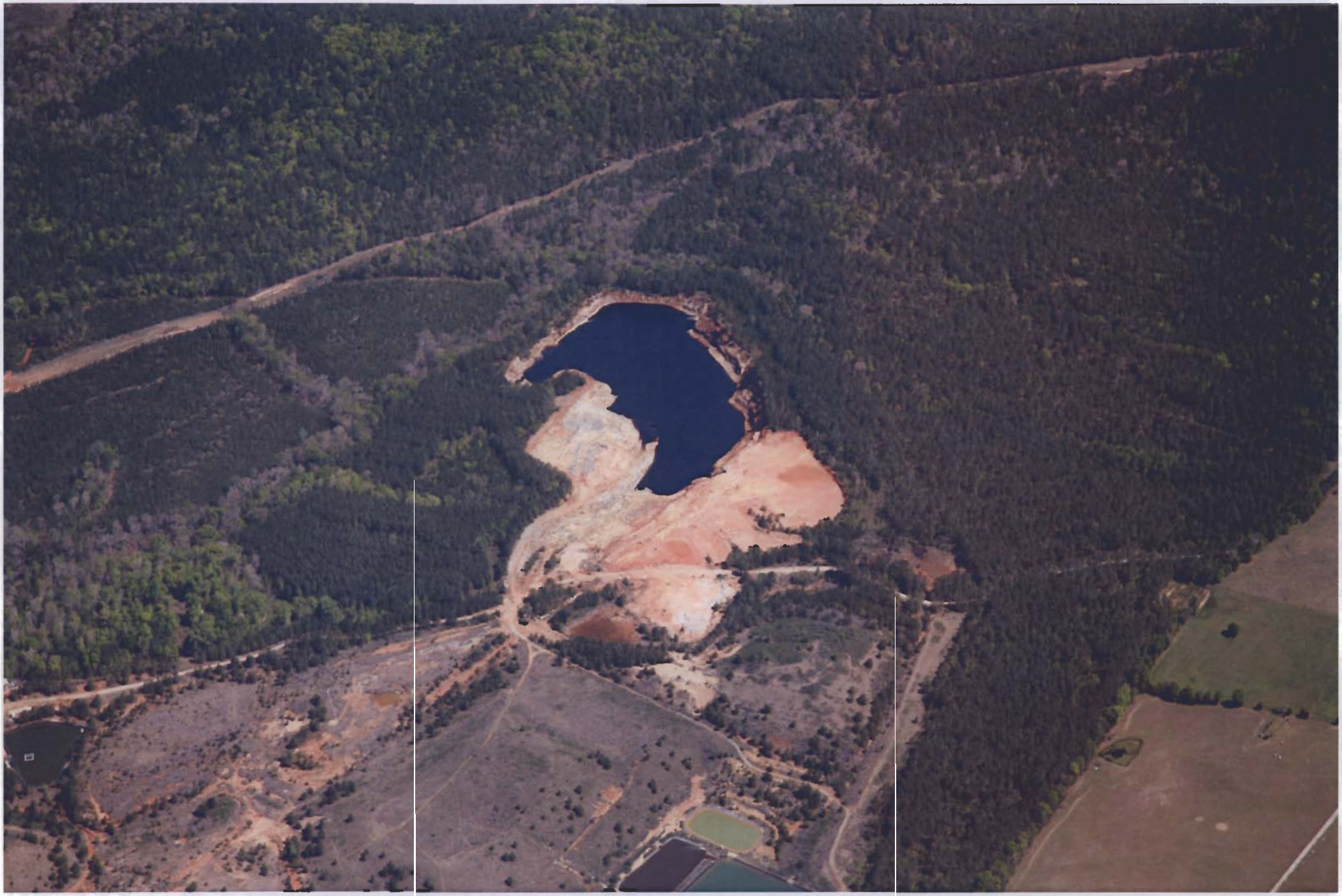

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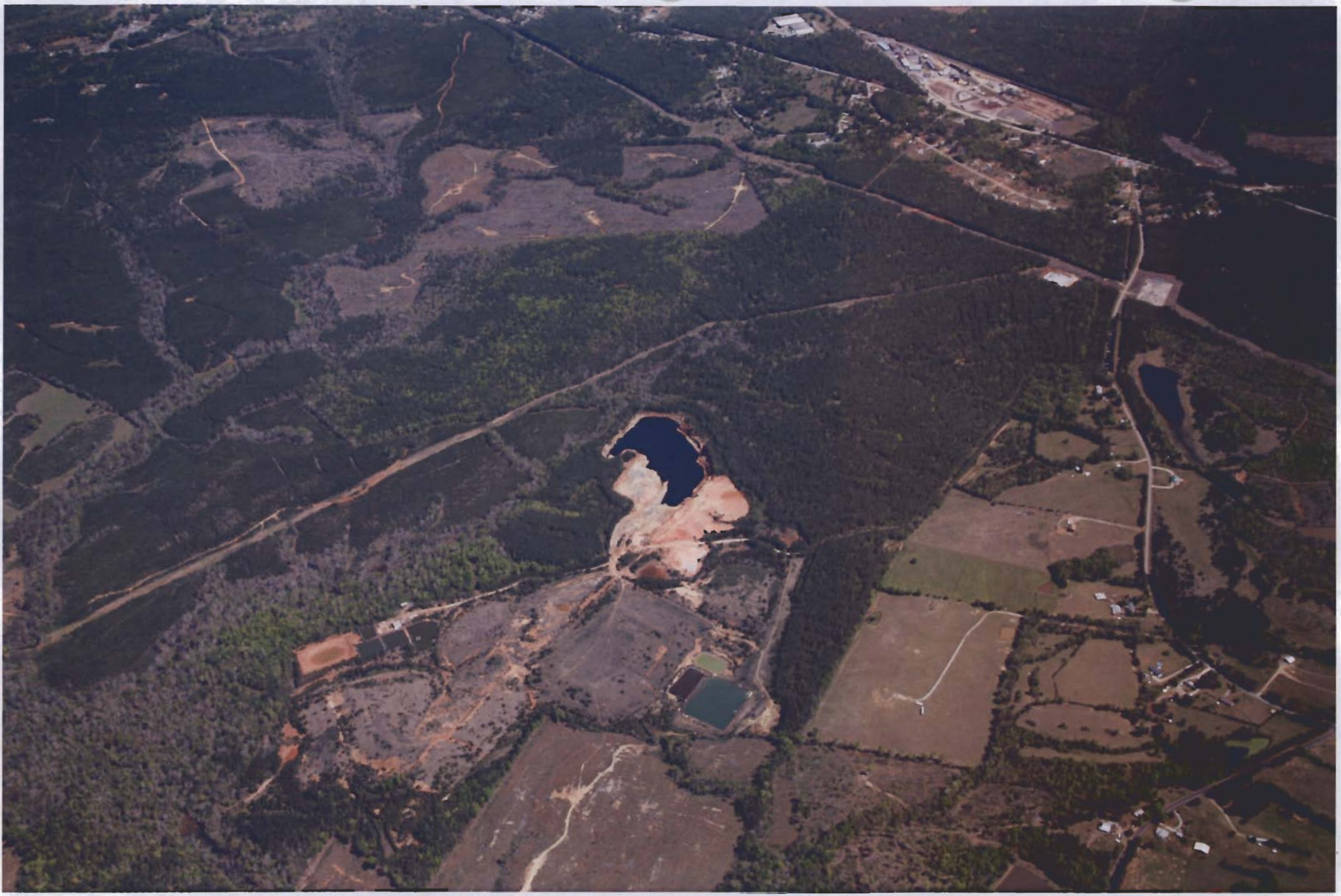

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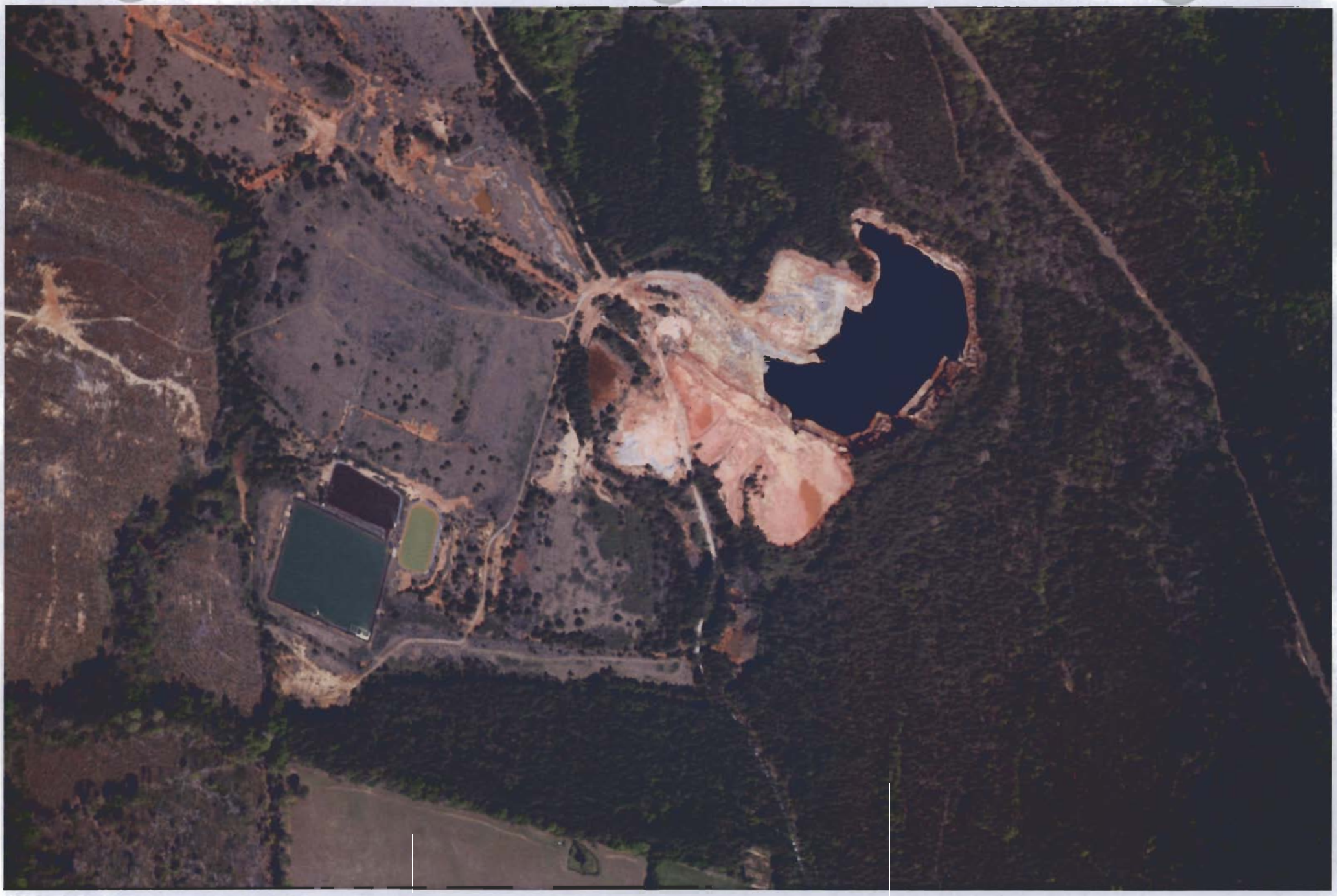

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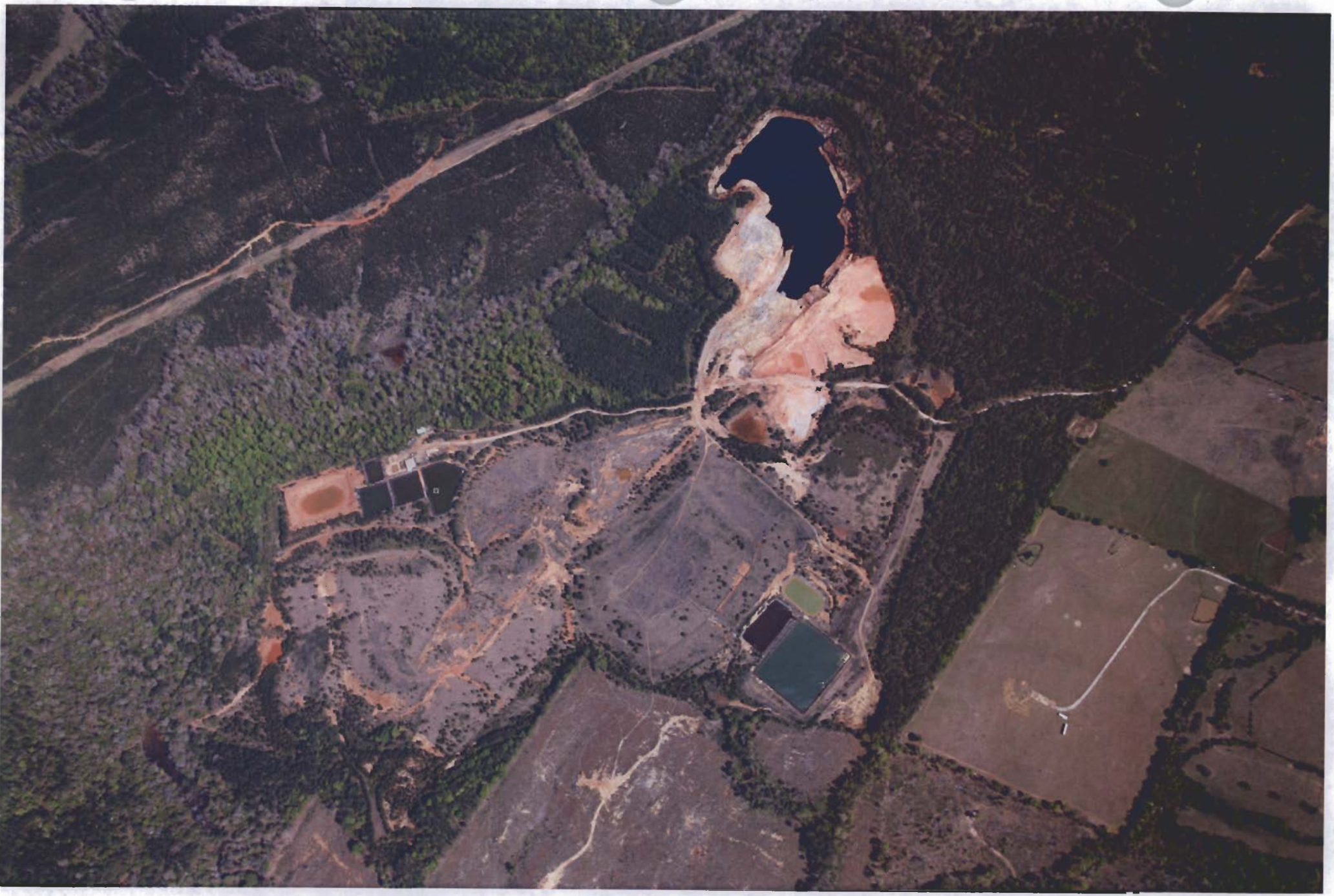

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HEALTH & SAFETY PLAN

Attachment 2

ERRS TEAM, REGION IV
EMERGENCY RESPONSE SITE HEALTH & SAFETY PLAN

Date:	**03/28/07**
Project Name:	**Barite Hill-Nevada Goldfields**
ERRS Delivery Order No.	**0071**
START Technical Direction Document No.	**N/A**
U.S. EPA Site I.D. No.	**2071**

Adopted By: Leo Francendese **Date:** _____
U.S. EPA On Scene Coordinator (OSC)

Adopted By: Neville W. Kingham **Date:** 03/29/07
ERRS Project Manager

Adopted By: _____ **Date:** _____
Lead START Member

1.0 INTRODUCTION

This document describes the health and safety guidelines developed for the Barite Hill-Nevada Goldfields to protect on-site personnel, visitors, and the public from physical harm and exposure to hazardous materials or wastes. This document has been designed for emergency response operations. The procedures and guidelines contained herein are based upon the best available information at the time of the plan's preparation.

2.0 KEY PERSONNEL

USEPA On-scene Coordinator(OSC)	Leo Francendese
Alternate OSC	
Principle ERRS Contractor	CMC, Inc.
Project Manager (PM):	Neville W. Kingham
Site Health & Safety Officer:	Robbie Neal
Technical Assistance Team (START):	
Other:	

3.0 SITE DESCRIPTION AND SCOPE OF WORK

3.1 Site Description:

The site is located on Jefferson Street in McCormick County in McCormick, SC 29835. The site is 3 miles south of the town of McCormick between US378 and US 221 on the Northern side of Road 30. The site consists of approximately 795 acres of property. The site is located along an unnamed tributary which leads to Hawes Creek. Outside of a 0.5 mile buffer zone the surrounding land use is both residential and commercial. Barite Hill-Nevada Goldfields was a fully integrated gold mining property including cyanide leach fields. There are 7 processing ponds, 3 multi acre waste rock piles and uncontrolled storm water runoff.

3.2 Site Background:

Facility was operated from 1991 to 1995 as a Gold mine. From 1995 to 1999 the site was under reclamation until bankruptcy.

3.3 Scope of Work:

EPA has issued CMC, Inc. a Delivery Order to accomplish the following tasks

1) Telephone conversations with the PM to prepare for the SOW
2) Prepare a H&S Plan
3) Mobilize personnel and equipment to the site in order to accomplish SOW
4) Secure all containers, drums, buckets and vessels of unknown chemicals and dispose of safely
5) Dispose of all chemicals and waste in the acid pit insuring complete mixing and neutralization of the chemicals
6) Secure building with metals contamination including removal of building and securing it in the acid pit.
7) Clean concrete pad associated with building.
8) Remove chemicals from water treatment plant and secure in acid pit.
9) Label with signage all access points into the site with hazard cautions.

4.0 PROJECT SAFETY AND HEALTH RISK ANALYSIS

This section identifies the general hazards associated with specific site operations and presents an analysis of chemicals, physical and environmental hazards that exist or potentially exist at the site.

4.1 Chemical Hazards

Material Safety Data Sheets (MSDS) for those hazardous substances known or expected to be present at the site will be attached to this Site Safety Plan and will be available in the command post. These sheets provide more comprehensive information regarding chemical hazards and proper chemical handling procedures.

Contaminant:	**Lead, Arsenic, Selenium Dust**
Physical Description:	**Dust of variety of colors and grain size**
OSHA PEL/TLV/IDLH:	**TLV 0.15 mg/m3**
Location of Hazard:	**Process building including duct work**
Route of Entry:	**Inhalation, Ingestion, Skin absorption**
Symptoms/First Aid:	**Coughing, irritant – remove to fresh air** **Rash-wash with water**

Contaminant:	**Caustic Waste (Liquid and Solid)**
Physical Description:	**Liquid or Solid**
OSHA PEL/TLV/IDLH:	**TLV 2mg/m3**
Location of Hazard:	**In tanks, drums, and containers around the site**
Route of Entry:	**Inhalation and Ingestion, Skin adsorption**
Symptoms/First Aid:	**Coughing – remove to fresh air** **Rash-wash with water**

Contaminant:	**Acid Waste (Liquid and Solid)**
Physical Description:	**Liquid or Solid**
OSHA PEL/TLV/IDLH:	**TLV 1mg/m3**
Location of Hazard:	**In tanks, drums and containers around the site**
Route of Entry:	**Inhalation, Ingestion and Skin adsorption**
Symptoms/First Aid:	**Coughing – remove to fresh air** **Rash-wash with water**

Other Chemical Hazards Anticipated:

5.0 PERSONAL PROTECTIVE EQUIPMENT

The following is a brief description of the personal protective equipment which may be required during various phases of the project. The USEPA terminology for protective equipment will be used; Levels A, B, C and D.

Respiratory protective equipment shall be NIOSH-approved and use shall conform to OSHA 29 CFR Part 1910.134. Each employer shall maintain a written respirator program detailing selection, use, cleaning, maintenance and storage of respiratory protective equipment.

Activity	Location	Level of Protection
Remove tanks, drums and containers and dispose of in acid pit	Throughout site	C
Cut up tanks and dispose of in acid pit	Throughout site	C
Remove Process building and duct work	Process building	B
Place Process building and ductwork in pit	Acid Pit	C
Place signage around the site entrances	Throughout site	D

5.1 Description of Selected Levels of Protection

Level "A" Protection
Fully Encapsulating Exposure Suit
(Type)
Self Contained Breathing Apparatus

Outer Gloves:
Inner Gloves:
Chemical Resistant Boot
Covers:
Hard Hat
Other:

Level "B" Protection:
Outer Chemical Protective Coveralls:
(Type)
Self-Contained Breathing Apparatus or
Airline with Egress
Outer Gloves:
Inner Gloves:
Chemical Resistant Boot
Covers:
Hard Hat
Steel-Toe Work Boots
Ankles/Wrists Taped with Duct Tape
Other:

Level "C" Protection
Outer Chemical Protective Coveralls
(Type)
Full Face Air Purifying Respirator (APR)
Cartridges or Canister:
Outer Gloves:
Inner Gloves:
Chemical Resistant Boots:
Steel-Toe Work Boots
Hard Hat
Wrist/Ankles Taped with Duct Tape
Other:

Level "D" Protection:
Coveralls (Type):
Gloves:
Steel-Toe Work Boots
Safety Glasses (as needed)
Splash Shield (as needed)
Saranex outer coveralls
Other:

6.0 DECONTAMINATION PROCEDURES

In general, everything that enters the exclusion zone at this site must be either decontaminated or properly discarded upon exit from the exclusion zone. Contamination reduction zone (CRZ) to be established at the entrance of the Process building.

6.1 Personnel Decontamination Procedures

Dry decon techniques will be utilized due to the lack of available water. PPE collection receptacles placed in drum with liner.

7.0 AIR MONITORING AND ACTION LEVELS

During the demolition and removal of the Process building and associated ductwork, CMC will be in level B and will continually spray down the area to minimize dusting and particulates. Because of the level of protection and spray down no air monitoring will be performed.

8.0 SITE CONTROL AND STANDARD OPERATING PROCEDURES

To protect any person not directly involved with the operational activities, work areas shall be clearly defined according to USEPA terminology. A work zone map shall be constructed at the site and included as an Attachment to this document. The work zones to be established include:

- Exclusion Zone - This zone is the area of known or suspected contamination. This zone shall be large enough to protect all personnel not involved in the cleanup operations from any anticipated hazard. All personnel working within this zone will be required to meet all applicable requirements of 29 CFR 1910.120 and to don the appropriate personnel protection.

- Contamination Reduction Zone - This zone, also referred to as the decontamination zone, provides an area for personnel and equipment decontamination, storage for personal protective clothing, equipment, etc. This zone also serves as a buffer zone to prevent possible migration of contaminated materials from potentially contaminated area to a clean area.

- Support Zone - The support zone includes all the areas used for support operation, including office facilities, equipment storage, and non-hazardous construction areas. Nothing contaminated should be brought into this zone.

- Access Routes - Access routes for all contractor personnel and/or emergence vehicles will be established at the site for site security and to maintain the flow of traffic into the site. See map in Attachment A.

- Emergency Station - Field emergency stations, consisting of a first aid kit, a fire extinguisher, and an emergency eye wash will be set up adjacent to each of the contamination reduction zones.

9.0 GENERAL FIELD SAFETY AND STANDARD OPERATING PROCEDURES

- The OSC or designated representative shall be responsible for informing all individuals entering the exclusion zone or decontamination zone of the contents of this plan and ensuring that each person signs the Safety Plan Acknowledgment Form. By signing the Safety Plan Acknowledgment Form, individuals are recognizing the hazards present on-site and the policies and procedures required to minimize exposure or adverse effects of these hazards

- All personnel (including visitors) entering the exclusion zone or decontamination zone must have completed training requirements for hazardous waste site work in accordance with OSHA 29 CFR 1910.120, or be qualified by previous training or experience. Documentation of training requirements is the responsibility of each employer.

- All personnel (including visitors) entering the exclusion zone or decontamination zone must have completed appropriate medical monitoring requirements required under OSHA 29 CFR 1910.120(f). Documentation of medical monitoring is the responsibility of each employer. If there are additional medical monitoring requirements for this site, evidence of compliance must also be included.

- All personnel (including visitors) entering the exclusion zone or decontamination zone using a full-face negative pressure respirator must have successfully passed a qualitative respirator FIT test in accordance with OSHA 29 CFR 1910.134 within the last 12 months. Documentation of FIT testing is the responsibility of each employer.
- A confined space is defined as a space or work area not designed or intended for normal human occupancy, having limited means of access and poor natural ventilation; and/or any structure, including buildings or rooms which have limited means of egress. If a confined space entry is to be conducted at this site, a written Confined Space Program will be appended to this Safety Plan, and a Confined Space Entry Permit shall be prepared.

- The "buddy system" will be used at all times by all field personnel in the exclusion zone. Maintain visual, voice or radio communication at all times.

- Eating, drinking, or smoking is permitted only in designated areas in the support zone.

- Hands and face must be thoroughly washed upon leaving the decon area.

- Beards or other facial hair that interferes with respirator fit will preclude admission to the exclusion zone.

- Daily safety meetings will be held at the start of each shift to ensure that all personnel understand site conditions and operating procedures, to ensure that personal protective equipment is being used correctly; and to address worker health and safety concerns.

10.0 EMERGENCY RESPONSE CONTINGENCY PLAN

10.1 Emergency Phone Numbers

Fire:	911
Police:	911
Ambulance:	911
Hospital :	Abbeville County Memorial Hospital
Address	420 Thomson Circle, Abbeville SC 29620 864-459-5011
Chemical Trauma Capabilities?	Yes
Poison Control Center:	
National Response Center	800-424-8802
Center for Disease Control	404-488-4100 (24 Hour)
US EPA Region IV	404-562-8700 (24 Hour)
AT&F (Explosives Information)	800-424-9555
Chemtrec	800-424-9300
State Environmental Agency:	

Note: Maps and directions to the hospital will be posted on site.

10.2 Emergency Equipment Available on Site

Communication Equipment	Location
Hand held radios	On-site personnel
Air horns	Individual sites

Medical Equipment

First Aid Kits: Site personnel trailer/ PM vehicle
Eye Wash Station: individual sites

Fire Fighting Equipment

Fire Extinguishers individual sites
Other:

Spill or Leak Equipment

Dry Absorbent: Storage Trailer

Additional Emergency Equipment

10.3 Project Personnel Responsibilities During Emergencies

On-Scene Coordinator (OSC)

As the administrator of the project, the OSC has primary responsibility for responding to and correcting emergency situations.

Project Manager (PM)

The PM must immediately report emergency situations to the OSC, take appropriate measures to protect site personnel and assist the OSC as necessary in responding to and mitigating the emergency situation. In the absence of a designated Site Safety Officer, the Project Manager will be responsible for the day-to-day safety supervision of site personnel.

10.4 Medical Emergencies

Any person who becomes ill or injured in the exclusion zone must be decontaminated to the maximum extent possible. If the injury or illness is minor, full decontamination should be completed and first aid administered prior to transport. If the patient's condition is serious, at lease partial decontamination should be completed (i.e. complete disrobing of the victim and redressing in clean coveralls or wrapping in a blanket). First aid should be administered

while awaiting an ambulance or paramedics. All injuries and illnesses must immediately be reported to the OSC.

10.5 Fire or Explosion

In the event of a fire or explosion, the local fire department should be summoned immediately. Upon their arrival, the OSC or designated alternate will advise the fire commander of the location, nature and identification of the hazardous material on-site.

If it is safe to do so, site personnel may:

- Use fire fighting equipment available on site; or,
- Remove or isolate flammable or other hazardous materials which may contribute to the fire.

10.6 Spill or Leaks

In the event of a spill or a leak, site personnel will:

- Locate the sources of the spillage and stop the flow if it can be done safely; and,
- Begin containment and recovery of the spilled materials.

10.7 Evacuation Routes and Resources

Evacuation routes have been established by work area locations for this site and included on the work zones map.

- Keep upwind of smoke, vapors or spill location.
- Exit through the decontamination corridor if possible.
- If evacuation is not via the decontamination corridor, site personnel should remove contaminated clothing once they are in a location of safety and leave it near the exclusion zone or in a safe place.
- The OSC will conduct a head count to insure all personnel have been evacuated safely.
- In the event that emergency site evacuation is necessary, all personnel are to:
    1. Escape the emergency situation;
    2. Decontaminate to the maximum extent practical; and,
    3. Meet at the muster area as shown on maps, Attachment A

SITE SAFETY PLAN ACKNOWLEDGMENT FORM

I have been informed and understand and will abide by the procedures set forth in the Safety and Health Plan and Amendments for the Barite Hill-Nevada Goldfields

Printed Name	Signature	Representing	Date